**Developing a Backend Admin for Learner’s Academy**

DESCRIPTION:

**Project objective:**

As a Full Stack Developer, design and develop a backend administrative portal for the Learner’s Academy. Use the GitHub repository to manage the project artefacts.

**Background of the problem statement:**

Learner’s Academy is a school that has an online management system. The system keeps track of its classes, subjects, students, and teachers. It has a back-office application with a single administrator login.

**The administrator can:**

● Set up a master list of all the subjects for all the classes

● Set up a master list of all the teachers

● Set up a master list of all the classes

● Assign classes for subjects from the master list

● Assign teachers to a class for a subject (A teacher can be assigned to different classes for different subjects)

● Get a master list of students (Each student must be assigned to a single class)

There will be an option to view a Class Report which will show all the information about the class, such as the list of students, subjects, and teachers

The goal of the company is to deliver a high-end quality product as early as possible.

**The flow and features of the application:**

● Plan more than two sprints to complete the application

● Document the flow of the application and prepare a flow chart

● List the core concepts and algorithms being used to complete this application

● Implement the appropriate concepts, such as exceptions, collections, and sorting techniques for source code optimization and increased performance

**You must use the following:**

● Eclipse/IntelliJ: An IDE to code for the application

● Java: A programming language to develop the web pages, databases, and others

● SQL: To create tables for admin, classes, students, and other specifics

● Git: To connect and push files from the local system to GitHub

● GitHub: To store the application code and track its versions

● Scrum: An efficient agile framework to deliver the product incrementally

● Search and Sort techniques: Data structures used for the project

● Specification document: Any open-source document or Google Docs

**The following requirements should be met:**

● The source code should be pushed to your GitHub repository. You need to document the steps and write the algorithms in it.

● The submission of your GitHub repository link is mandatory. In order to track your task, you need to share the link of the repository. You can add a section in your document.

● Document the process step-by-step starting from sprint planning to the product release.

● The application should not close, exit, or throw an exception if the user specifies an invalid input.

● You need to submit the final specification document which will include:

● Project and developer details

● Sprints planned and the tasks achieved in them

● Algorithms and flowcharts of the application

● Core concepts used in the project

● Links to the GitHub repository to verify the project completion.

**SOURCE CODE**

**AdminControllerServlet.java**:-

package com.anand.training;

import java.io.IOException;

import java.util.List;

import javax.annotation.Resource;

import javax.servlet.RequestDispatcher;

import javax.servlet.ServletException;

import javax.servlet.annotation.WebServlet;

import javax.servlet.http.Cookie;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

import javax.sql.DataSource;

/\*\*

\* Servlet implementation class AdminControllerServlet

\*/

@WebServlet("/AdminControllerServlet")

public class AdminControllerServlet extends HttpServlet {

private static final long serialVersionUID = 1L;

private DbRetrieve dbRetrieve;

@Resource(name = "new\_Abhishek")

private DataSource datasource;

@Override

public void init() throws ServletException {

super.init();

// create instance of db util, to pass in conn pool object

try {

dbRetrieve = new DbRetrieve(datasource);

} catch (Exception e) {

throw new ServletException(e);

}

}

public AdminControllerServlet() {

super();

// TODO Auto-generated constructor stub

}

@Override

protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException {

doGet(req, resp);

}

/\*\*

\* @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse

\* response)

\*/

protected void doGet(HttpServletRequest request, HttpServletResponse response)

throws ServletException, IOException {

// TODO Auto-generated method stub

try {

// read the "command" parameter

String command = request.getParameter("command");

if (command == null) {

command = "CLASSES";

}

// if no cookeies

if (!getCookies(request, response) && (!command.equals("LOGIN"))) {

response.sendRedirect("/Administrative-Portal/login.jsp");

}

else {

// if there is no command, how to handle

// route the data to the appropriate method

switch (command) {

case "STUDENTS":

studentsList(request, response);

break;

case "TEACHERS":

teachersList(request, response);

break;

case "SUBJECTS":

subjectList(request, response);

break;

case "CLASSES":

classestList(request, response);

break;

case "ST\_LIST":

classStudentsList(request, response);

break;

case "LOGIN":

login(request, response);

break;

default:

classestList(request, response);

}

}

} catch (Exception e) {

throw new ServletException(e);

}

// response.getWriter().append("Served at: ").append(request.getContextPath());

}

private void studentsList(HttpServletRequest request, HttpServletResponse response) throws Exception {

// get students from db util

List<Student> students = dbRetrieve.getStudents();

// add students to the request

request.setAttribute("STUDENT\_LIST", students);

// send it to the jsp view page

RequestDispatcher dispatcher = request.getRequestDispatcher("/list-students.jsp");

dispatcher.forward(request, response);

}

private void teachersList(HttpServletRequest request, HttpServletResponse response) throws Exception {

// get students from db util

List<Teacher> teachers = dbRetrieve.getTeachers();

// add students to the request

request.setAttribute("TEACHERS\_LIST", teachers);

// send it to the jSP view page

RequestDispatcher dispatcher = request.getRequestDispatcher("/teachers-list.jsp");

dispatcher.forward(request, response);

}

private void subjectList(HttpServletRequest request, HttpServletResponse response) throws Exception {

// get subjects from db util

List<Subject> subjects = dbRetrieve.getSubjects();

// add subjects to the request

request.setAttribute("SUBJECTS\_LIST", subjects);

// send it to the jSP view page

RequestDispatcher dispatcher = request.getRequestDispatcher("/subjects-list.jsp");

dispatcher.forward(request, response);

}

private void classestList(HttpServletRequest request, HttpServletResponse response) throws Exception {

// get subjects from db util

List<Class> classes = dbRetrieve.getClasses();

// add subjects to the request

request.setAttribute("CLASSES\_LIST", classes);

// send it to the jSP view page

RequestDispatcher dispatcher = request.getRequestDispatcher("/classes-list.jsp");

dispatcher.forward(request, response);

}

private void login(HttpServletRequest request, HttpServletResponse response) throws Exception {

String username = request.getParameter("username");

String password = request.getParameter("password");

if (username.toLowerCase().equals("admin") && password.toLowerCase().equals("admin")) {

Cookie cookie = new Cookie(username, password);

// Setting the maximum age to 1 day

cookie.setMaxAge(86400); // 86400 seconds in a day

// Send the cookie to the client

response.addCookie(cookie);

classestList(request, response);

} else {

RequestDispatcher dispatcher = request.getRequestDispatcher("/login.jsp");

dispatcher.forward(request, response);

}

}

private void classStudentsList(HttpServletRequest request, HttpServletResponse response) throws Exception {

int classId = Integer.parseInt(request.getParameter("classId"));

String section = request.getParameter("section");

String subject = request.getParameter("subject");

// get subjects from db util

List<Student> students = dbRetrieve.loadClassStudents(classId);

// add subjects to the request

request.setAttribute("STUDENTS\_LIST", students);

request.setAttribute("SECTION", section);

request.setAttribute("SUBJECT", subject);

// send it to the jSP view page

RequestDispatcher dispatcher = request.getRequestDispatcher("/class-students.jsp");

dispatcher.forward(request, response);

}

private boolean getCookies(HttpServletRequest request, HttpServletResponse response) throws Exception {

boolean check = false;

Cookie[] cookies = request.getCookies();

// Find the cookie of interest in arrays of cookies

for (Cookie cookie : cookies) {

if (cookie.getName().equals("admin") && cookie.getValue().equals("admin")) {

check = true;

break;

}

}

return check;

}

}

**Class.java**:-

package com.anand.training;

public class Class {

private int id;

private int section;

private String teacher;

private String subject;

private String time;

public Class(int id, int section, String teacher, String subject, String time) {

super();

this.id = id;

this.section = section;

this.teacher = teacher;

this.subject = subject;

this.time = time;

}

public int getId() {

return id;

}

public void setId(int id) {

this.id = id;

}

public int getSection() {

return section;

}

public void setSection(int section) {

this.section = section;

}

public String getTeacher() {

return teacher;

}

public void setTeacher(String teacher) {

this.teacher = teacher;

}

public String getSubject() {

return subject;

}

public void setSubject(String subject) {

this.subject = subject;

}

public String getTime() {

return time;

}

public void setTime(String time) {

this.time = time;

}

}

**DBRetrieve.java**:-

package com.anand.training;

import java.sql.Connection;

import java.sql.ResultSet;

import java.sql.Statement;

import java.util.ArrayList;

import java.util.List;

import javax.sql.DataSource;

public class DbRetrieve {

private DataSource dataSource;

public DbRetrieve(DataSource dataSource) {

this.dataSource = dataSource;

}

public List<Student> getStudents() {

List<Student> students = new ArrayList<>();

Connection myConn = null;

Statement myStmt = null;

ResultSet myRs = null;

try {

// get a connection

myConn = dataSource.getConnection();

// create sql stmt

String sql = "SELECT \* FROM students";

myStmt = myConn.createStatement();

// execute query

myRs = myStmt.executeQuery(sql);

// process result

while (myRs.next()) {

// retrieve data from result set row

int id = myRs.getInt("id");

String firstName = myRs.getString("fname");

String lastName = myRs.getString("lname");

int age = myRs.getInt("age");

int aclass = myRs.getInt("class");

// create new student object

Student tempStudent = new Student(id, firstName, lastName, age, aclass);

// add it to the list of students

students.add(tempStudent);

}

} catch (Exception e) {

// TODO: handle exception

} finally {

// close JDBC objects

close(myConn, myStmt, myRs);

}

return students;

}

public List<Teacher> getTeachers() {

List<Teacher> teachers = new ArrayList<>();

Connection myConn = null;

Statement myStmt = null;

ResultSet myRs = null;

try {

// get a connection

myConn = dataSource.getConnection();

// create sql stmt

String sql = "SELECT \* FROM teachers";

myStmt = myConn.createStatement();

// execute query

myRs = myStmt.executeQuery(sql);

// process result

while (myRs.next()) {

// retrieve data from result set row

int id = myRs.getInt("id");

String firstName = myRs.getString("fname");

String lastName = myRs.getString("lname");

int age = myRs.getInt("age");

// create new student object

Teacher temp = new Teacher(id, firstName, lastName, age);

// add it to the list of students

teachers.add(temp);

}

} catch (Exception e) {

// TODO: handle exception

} finally {

// close JDBC objects

close(myConn, myStmt, myRs);

}

return teachers;

}

public List<Subject> getSubjects() {

List<Subject> subjects = new ArrayList<>();

Connection myConn = null;

Statement myStmt = null;

ResultSet myRs = null;

try {

// get a connection

myConn = dataSource.getConnection();

// create sql stmt

String sql = "SELECT \* FROM subjects";

myStmt = myConn.createStatement();

// execute query

myRs = myStmt.executeQuery(sql);

// process result

while (myRs.next()) {

// retrieve data from result set row

int id = myRs.getInt("id");

String name = myRs.getString("name");

String shortcut = myRs.getString("shortcut");

// create new student object

Subject temp = new Subject(id, name,shortcut);

// add it to the list of students

subjects.add(temp);

}

} catch (Exception e) {

// TODO: handle exception

} finally {

// close JDBC objects

close(myConn, myStmt, myRs);

}

return subjects;

}

public List<Class> getClasses() {

List<Class> classes = new ArrayList<>();

Connection myConn = null;

Statement myStmt = null;

ResultSet myRs = null;

try {

// get a connection

myConn = dataSource.getConnection();

// create sql stmt

String sql = "SELECT \* FROM classes";

myStmt = myConn.createStatement();

// execute query

myRs = myStmt.executeQuery(sql);

// process result

while (myRs.next()) {

// retrieve data from result set row

int id = myRs.getInt("id");

int section = myRs.getInt("section");

int subject = myRs.getInt("subject");

int teacher = myRs.getInt("teacher");

String time = myRs.getString("time");

Teacher tempTeacher = loadTeacher(teacher);

Subject tempSubject = loadSubject(subject);

String teacher\_name = tempTeacher.getFname() + " " + tempTeacher.getLname();

// create new student object

Class temp = new Class(id, section, teacher\_name, tempSubject.getName(), time);

// add it to the list of students

classes.add(temp);

}

} catch (Exception e) {

// TODO: handle exception

} finally {

// close JDBC objects

close(myConn, myStmt, myRs);

}

return classes;

}

public Teacher loadTeacher(int teacherId) {

Teacher theTeacher = null;

Connection myConn = null;

Statement myStmt = null;

ResultSet myRs = null;

try {

// get a connection

myConn = dataSource.getConnection();

// create sql stmt

String sql = "SELECT \* FROM teachers WHERE id = " + teacherId;

myStmt = myConn.createStatement();

// execute query

myRs = myStmt.executeQuery(sql);

// process result

while (myRs.next()) {

// retrieve data from result set row

int id = myRs.getInt("id");

String fname = myRs.getString("fname");

String lname = myRs.getString("lname");

int age = myRs.getInt("age");

theTeacher = new Teacher(id, fname, lname, age);

}

} catch (Exception e) {

// TODO: handle exception

} finally {

// close JDBC objects

close(myConn, myStmt, myRs);

}

return theTeacher;

}

public Subject loadSubject(int subjectId) {

Subject theSubject = null;

Connection myConn = null;

Statement myStmt = null;

ResultSet myRs = null;

try {

// get a connection

myConn = dataSource.getConnection();

// create sql stmt

String sql = "SELECT \* FROM subjects WHERE id = " + subjectId;

myStmt = myConn.createStatement();

// execute query

myRs = myStmt.executeQuery(sql);

// process result

while (myRs.next()) {

// retrieve data from result set row

int id = myRs.getInt("id");

String name = myRs.getString("name");

String shortcut = myRs.getString("shortcut");

theSubject = new Subject(id, name,shortcut);

}

} catch (Exception e) {

// TODO: handle exception

} finally {

// close JDBC objects

close(myConn, myStmt, myRs);

}

return theSubject;

}

@SuppressWarnings("unused")

public Class loadClass(int classId) {

Class theClass = null;

Connection myConn = null;

Statement myStmt = null;

ResultSet myRs = null;

try {

// get a connection

myConn = dataSource.getConnection();

// create sql stmt

String sql = "SELECT \* FROM clasess WHERE id = " + classId;

myStmt = myConn.createStatement();

// execute query

myRs = myStmt.executeQuery(sql);

// process result

while (myRs.next()) {

// retrieve data from result set row

int id = myRs.getInt("id");

int section = myRs.getInt("section");

int subject = myRs.getInt("subject");

int teacher = myRs.getInt("teacher");

String time = myRs.getString("time");

Teacher tempTeacher = loadTeacher(teacher);

Subject tempSubject = loadSubject(subject);

String teacher\_name = tempTeacher.getFname() + " " + tempTeacher.getLname();

}

} catch (Exception e) {

// TODO: handle exception

} finally {

// close JDBC objects

close(myConn, myStmt, myRs);

}

return theClass;

}

public List<Student> loadClassStudents(int classId) {

List<Student> students = new ArrayList<>();

Connection myConn = null;

Statement myStmt = null;

ResultSet myRs = null;

try {

// get a connection

myConn = dataSource.getConnection();

// create sql stmt

String sql = "SELECT \* FROM students WHERE class = " + classId;

myStmt = myConn.createStatement();

// execute query

myRs = myStmt.executeQuery(sql);

// process result

while (myRs.next()) {

// retrieve data from result set row

int id = myRs.getInt("id");

String firstName = myRs.getString("fname");

String lastName = myRs.getString("lname");

int age = myRs.getInt("age");

int aclass = myRs.getInt("class");

// create new student object

Student tempStudent = new Student(id, firstName, lastName, age, aclass);

students.add(tempStudent);

}

} catch (Exception e) {

// TODO: handle exception

} finally {

// close JDBC objects

close(myConn, myStmt, myRs);

}

return students;

}

private void close(Connection myConn, Statement myStmt, ResultSet myRs) {

try {

if (myRs != null) {

myRs.close();

}

if (myStmt != null) {

myStmt.close();

}

if (myConn != null) {

myConn.close();

}

} catch (Exception e) {

e.printStackTrace();

}

}

}

**Student.java**:-

package com.anand.training;

public class Student {

private int id;

private String fname;

private String lname;

private int age;

private int aclass;

public Student(int id, String fname, String lname, int age, int aclass) {

super();

this.id = id;

this.fname = fname;

this.lname = lname;

this.age = age;

this.aclass = aclass;

}

public int getId() {

return id;

}

public void setId(int id) {

this.id = id;

}

public String getFname() {

return fname;

}

public void setFname(String fname) {

this.fname = fname;

}

public String getLname() {

return lname;

}

public void setLname(String lname) {

this.lname = lname;

}

public int getAge() {

return age;

}

public void setAge(int age) {

this.age = age;

}

public int getAclass() {

return aclass;

}

public void setAclass(int aclass) {

this.aclass = aclass;

}

@Override

public String toString() {

return "Student [id=" + id + ", fname=" + fname + ", lname=" + lname + ", age=" + age + ", aclass=" + aclass

+ "]";

}

}

**Subject.java**:-

package com.anand.training;

public class Subject {

private int id;

private String name;

private String shortcut;

public Subject(int id, String name, String shortcut ) {

super();

this.id = id;

this.name = name;

this.shortcut = shortcut;

}

public int getId() {

return id;

}

public void setId(int id) {

this.id = id;

}

public String getShortcut() {

return shortcut;

}

public void setShortcut(String shortcut) {

this.shortcut = shortcut;

}

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

}

**Teacher.java**:-

package com.anand.training;

public class Teacher {

private int id;

private String fname;

private String lname;

private int age;

public Teacher(int id, String fname, String lname, int age) {

super();

this.id = id;

this.fname = fname;

this.lname = lname;

this.age = age;

}

public int getId() {

return id;

}

public void setId(int id) {

this.id = id;

}

public String getFname() {

return fname;

}

public void setFname(String fname) {

this.fname = fname;

}

public String getLname() {

return lname;

}

public void setLname(String lname) {

this.lname = lname;

}

public int getAge() {

return age;

}

public void setAge(int age) {

this.age = age;

}

}

**TestServlet.java**:-

package com.anand.training;

import java.io.IOException;

import java.io.PrintWriter;

import java.sql.Connection;

import java.sql.ResultSet;

import java.sql.Statement;

import javax.annotation.Resource;

import javax.servlet.ServletException;

import javax.servlet.annotation.WebServlet;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

import javax.sql.DataSource;

@WebServlet("/TestServlet")

public class TestServlet extends HttpServlet {

private static final long serialVersionUID = 1L;

//Define datasource/connection pool for reference

@Resource(name="new\_Abhishek")

private DataSource dataSource;

/\*\*

\* @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)

\*/

protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

// Set the printwriter

PrintWriter out = response.getWriter();

response.setContentType("text/plain");

// establish connection to the DB

Connection myConn = null;

Statement myStmt = null;

ResultSet myRs = null;

try {

myConn = dataSource.getConnection();

//create a sql statement

String sql = "select \* from students";

myStmt = myConn.createStatement();

//execute the sql statement

myRs = myStmt.executeQuery(sql);

//process the resultset

while(myRs.next()) {

String fname = myRs.getString("fname");

out.println(fname);

}

}

catch(Exception e) {

e.printStackTrace();

}

**CSS Files**

**Add-student-style.css:-**

form {

margin-top: 10px;

}

label {

font-size: 16px;

width: 100px;

display: block;

text-align: right;

margin-right: 10px;

margin-top: 8px;

margin-bottom: 8px;

}

input {

width: 250px;

border: 1px solid #666;

border-radius: 5px;

padding: 4px;

font-size: 16px;

}

.save {

font-weight: bold;

width: 130px;

padding: 5px 10px;

margin-top: 30px;

background: #cccccc;

}

table {

border-style:none;

width:50%;

}

tr:nth-child(even) {background: #FFFFFF}

tr:nth-child(odd) {background: #FFFFFF}

tr {

border-style:none;

text-align:left;

}

**login.css**:-

Body {

font-family: Calibri, Helvetica, sans-serif;

background-color: pink;

}

button {

justify-content: center;

background-color: #4CAF50;

width: 100%;

color: white;

padding: 15px;

margin: 10px 0px;

border: none;

cursor: pointer;

}

form {

border: 1.4px solid black;

width: 45%;

margin: 0 auto;

}

input[type=text], input[type=password] {

justify-content: center;

width: 100%;

margin: 8px 0;

padding: 12px 20px;

display: inline-block;

border: 2px solid green;

box-sizing: border-box;

}

button:hover {

opacity: 0.7;

}

.container {

justify-content: center;

padding: 15px;

background-color: #FFF8DC;

}

**style.css**:-

html, body{

padding:0px;

font-family:Verdana, Arial, Helvetica, sans-serif;

margin-left: 103px; /\* Same as the width of the sidenav \*/

}

table {

border-collapse:collapse;

border:1px solid gray;

font-family: Tahoma,Verdana,Segoe,sans-serif;

width:72%;

}

th {

border-bottom:1px solid gray;

background:none repeat scroll 0 0 #0775d3;

padding:10px;

color: #FFFFFF;

}

tr {

border-top:1px solid gray;

text-align:center;

}

tr:nth-child(even) {background: #FFFFFF}

tr:nth-child(odd) {background: #BBBBBB}

#wrapper {width: 100%; text-align: center; }

#header {width: 72%; background: #0775d3; margin-top: 0px; padding:5px 0px 15px 0px;}

#header h3 {width: 100%; margin:auto; color: #FFFFFF;}

#container {width: 100%; margin:auto}

#container h3 {color: #000;}

#container #content {margin-top: 20px;}

.add-student-button {

border: 1px solid #666;

border-radius: 5px;

padding: 4px;

font-size: 12px;

font-weight: bold;

width: 120px;

padding: 5px 10px;

margin-bottom: 15px;

background: #cccccc;

}

.sidenav {

height: 100%;

width: 200px;

border-color: #FFFFFF;

position: fixed;

z-index: 1;

top: 0;

left: 0;

background-color: #000080;

overflow-x: hidden;

padding-top: 20px;

}

.sidenav a {

padding: 6px 6px 6px 32px;

text-decoration: none;

font-size: 25px;

color: white;

display: block;

}

.sidenav a:hover {

color: blue;

}

@media screen and (max-height: 450px) {

.sidenav {padding-top: 15px;}

.sidenav a {font-size: 18px;}

}

#page{

height: 100%;

}

#logo{

font-family: 'Trebuchet MS', sans-serif;

text-align: center;

color: white;

}

.bar-item{

border-color: #FFFFFF;

border-width: 3px;

border-bottom: .5px solid rgba(255, 255, 255, 0.247);

}

**JSP Files**

**classes.jsp**:-

<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>

<!DOCTYPE html>

<html>

<head>

<meta charset="ISO-8859-1">

<title>List of Classes</title>

<link type="text/css" rel="stylesheet" href="css/style.css">

</head>

<body style="background-image: url('css/background.jpg');">

<div id="page">

<jsp:include page="left-list.jsp" />

<div id="wrapper">

<div id="header">

<h3>Classes</h3>

</div>

</div>

<div id="container">

<div id="content">

<table>

<tr>

<th>Section</th>

<th>Subject</th>

<th>Teacher</th>

<th>Time</th>

<th>List of Students</th>

</tr>

<c:forEach var="tempClass" items="${CLASSES\_LIST }">

<tr>

<c:url var="tempLink" value="AdminControllerServlet">

<c:param name="command" value="ST\_LIST" />

<c:param name="classId" value="${tempClass.id }" />

<c:param name="section" value="${tempClass.section }" />

<c:param name="subject" value="${tempClass.subject }" />

</c:url>

<td>${tempClass.section}</td>

<td>${tempClass.subject}</td>

<td>${tempClass.teacher}</td>

<td>${tempClass.time}</td>

<td><a href="${tempLink }">List</a></td>

</tr>

</c:forEach>

</table>

</div>

</div>

</div>

</body>

</html>

**class-student.jsp**:-

<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>

<!DOCTYPE html>

<html>

<head>

<meta charset="ISO-8859-1">

<title>Students of a Class</title>

<link type="text/css" rel="stylesheet" href="css/style.css">

</head>

<body style="background-image: url('css/background.jpg');">

<div id="page" >

<jsp:include page="left-list.jsp" />

<div id="wrapper">

<div id="header">

<h3>Students of ${SUBJECT} class section ${SECTION} </h3>

</div>

</div>

<div id="container">

<div id="content">

<table>

<tr>

<th>First Name</th>

<th>Last Name</th>

<th>age</th>

</tr>

<c:forEach var="tempStudent" items="${STUDENTS\_LIST}">

<tr>

<td>${tempStudent.fname}</td>

<td>${tempStudent.lname}</td>

<td>${tempStudent.age}</td>

</tr>

</c:forEach>

</table>

</div>

</div>

</div>

</body>

</html>

**left-list.jsp**:-

<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>

<div class="sidenav">

<h3 id="logo">

Administrative <br /> Academy Portal

</h3>

<c:url var="classesLink" value="AdminControllerServlet">

<c:param name="command" value="CLASSES" />

</c:url>

<c:url var="subjectsLink" value="AdminControllerServlet">

<c:param name="command" value="SUBJECTS" />

</c:url>

<c:url var="teachersLink" value="AdminControllerServlet">

<c:param name="command" value="TEACHERS" />

</c:url>

<c:url var="studentsLink" value="AdminControllerServlet">

<c:param name="command" value="STUDENTS" />

</c:url>

<a class="bar-item" href="${classesLink}">Classes</a>

<a class="bar-item" href="${subjectsLink}">Subjects</a>

<a class="bar-item" href="${teachersLink}">Teachers</a>

<a class="bar-item" href="${studentsLink}">Students</a>

<a class="bar-item" href="login.jsp">Log out</a>

</div>

**list-students.jsp**:-

<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>

<!DOCTYPE html>

<html>

<head>

<meta charset="ISO-8859-1">

<title>List of Students</title>

<link type="text/css" rel="stylesheet" href="css/style.css">

</head>

<body style="background-image: url('css/background.jpg');">

<div id="page" >

<jsp:include page="left-list.jsp" />

<div id="wrapper">

<div id="header">

<h3>Students</h3>

</div>

</div>

<div id="container">

<div id="content">

<table>

<tr>

<th>First Name</th>

<th>Last Name</th>

<th>age</th>

</tr>

<c:forEach var="tempStudent" items="${STUDENT\_LIST }">

<tr>

<td>${tempStudent.fname}</td>

<td>${tempStudent.lname}</td>

<td>${tempStudent.age}</td>

</tr>

</c:forEach>

</table>

</div>

</div>

</div>

</body>

</html>

**login.jsp**:-

<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>

<!DOCTYPE html>

<html>

<head>

<meta charset="ISO-8859-1">

<title>Login</title>

<link type="text/css" rel="stylesheet" href="css/login.css">

</head>

<body style="background-image: url('css/background.jpg');">

<center> <h1> Admin Login </h1> </center>

<form action="AdminControllerServlet" method="POST">

<div class="container">

<input type="hidden" name="command" value="LOGIN" />

<label>Username : </label>

<br/>

<input type="text" placeholder="Enter Username" name="username" required>

<br/>

<label>Password : </label>

<br/>

<input type="password" placeholder="Enter Password" name="password" required>

<br/>

<button type="submit">Login</button>

<br/>

<input type="checkbox" checked="checked"> Remember me

</div>

</form>

</body>

</html>

**subjects.jsp**:-

<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>

<!DOCTYPE html>

<html>

<head>

<meta charset="ISO-8859-1">

<title>List of Teachers</title>

<link type="text/css" rel="stylesheet" href="css/style.css">

</head>

<body style="background-image: url('css/background.jpg');">

<div id="page">

<jsp:include page="left-list.jsp" />

<div id="wrapper">

<div id="header">

<h3>Subjects</h3>

</div>

</div>

<div id="container">

<div id="content">

<table>

<tr>

<th>Name</th>

<th>Shortcut</th>

</tr>

<c:forEach var="tempSubject" tems="${SUBJECTS\_LIST }">

<tr>

<td>${tempSubject.name}</td>

<td>${tempSubject.shortcut}</td>

</tr>

</c:forEach>

</table>

</div>

</div>

</div>

</body>

</html>

**teachers.jsp**:-

<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>

<!DOCTYPE html>

<html>

<head>

<meta charset="ISO-8859-1">

<title>List of Teachers</title>

<link type="text/css" rel="stylesheet" href="css/style.css">

</head>

<body style="background-image: url('css/background.jpg');">

<div id="page">

<jsp:include page="left-list.jsp" />

<div id="wrapper">

<div id="header">

<h3>Teachers</h3>

</div>

</div>

<div id="container">

<div id="content">

<table>

<tr>

<th>First Name</th>

<th>Last Name</th>

<th>age</th>

</tr>

<c:forEach var="tempStudent" items="${TEACHERS\_LIST }">

<tr>

<td>${tempStudent.fname}</td>

<td>${tempStudent.lname}</td>

<td>${tempStudent.age}</td>

</tr>

</c:forEach>

</table>

</div>

</div>

</div>

</body>

</html>

}

}